(19) World Intellectual Property Organization International Bureau





(43) International Publication Date 25 November 2004 (25.11.2004)

PCT

(10) International Publication Number WO 2004/101760 A3

(51) International Patent Classification⁷: 1/20, 15/00, C07H 21/04

C12N 9/20,

(21) International Application Number:

PCT/US2004/014685

(22) International Filing Date: 12 May 2004 (12.05.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 60/470,069

12 May 2003 (12.05.2003) US

- (71) Applicant (for all designated States except US): GENEN-COR INTERNATIONAL, INC. [US/US]; 925 Page Mill Road, Palo Alto, CA 94304 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): JONES, Brian, Edward [GB/NL]; Gravin Juliana van Stolberglaan 24, NL-2263 VA Leidschendam (NL). GRANT, William, D. [GB/GB]; 15 The Tithings, Kibworth Beauchamp Leicestershire LE8 0PU (GB). HEAPHY, Shaun [GB/GB]; 426 Uppingham Road, Leicester Leicestershire LE5 2DP (GB). REES, Helen, C. [GB/GB]; Flat 3, 15 Moor Oaks Road, Sheffield S10 1BX (GB). GRANT, Susan [GB/GB]; 15 The Tithings, Kibworth Beauchamp Leicestershire LE8 0PU (GB).

- (74) Agent: ITO, Richard, T.; Genencor International, INC., 925 Page Mill Road, Palo Alto, CA 94304 (US).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- (88) Date of publication of the international search report: 12 May 2005

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: NOVEL LIPOLYTIC ENZYME ELIP

(57) Abstract: ABSTRACT The present invention provides a novel nucleic acid sequence, designated *ELIP*, encoding a lipolytic enzyme and the corresponding encoded amino acid sequences. The invention also provides expression vectors and host cells comprising a nucleic acid sequence encoding at least one novel lipolytic enzyme, recombinant lipolytic enzyme proteins and methods for producing the same.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US04/14685

CI A	CONTINUE OF COMPANY			
A. CLASSIFICATION OF SUBJECT MATTER IPC(7) : C12N 9/20, 1/20, 15/00; C07H 21/04				
IPC(7) : C12N 9/20, 1/20, 15/00; C07H 21/04 US CL : 435/198, 252.3, 320.1; 536/23.2; 510/226				
According to International Patent Classification (IPC) or to both national classification and IPC				
B. FIELDS SEARCHED				
Minimum documentation coerched (classification and fill and the second s				
Minimum documentation searched (classification system followed by classification symbols) U.S.: 435/198, 252.3, 320.1; 536/23.2; 510/226				
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched				
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)				
STN & WEST.				
C. DOCUMENTS CONSIDERED TO BE RELEVANT				
Category *	Citation of document, with indication, where	appropriate of the relevant personne	Delever es elei No	
X,P	REES et al. Detecting cellulase and esterase enzym	appropriate, or the relevant passages	Relevant to claim No.	
)	present in environmental DNA libraries. Extremop	philes. October 2003 Vol. 7 No. 5	1-13	
1	pages 415-421. See page 417, Table 1, ELIP clone	, 4313 bp; page 418. ELIP predicted		
	arnino acid sequence which is identical to Applican	its' SEQ ID NO: 3. Applicants SEQ ID		
	NO: 1 is also 4313 bp in length.			
A,P	VARGAS et al. Lipase-producing microorganisms from a Kenyan alkaline soda lake.			
	Biotechnology Letters. January 2004, Vol. 26, No. 2, pages 81-86.			
		}		
į.				
ł				
Further	documents are listed in the continuation of Box C.	See patent family annex.		
 Special categories of cited documents: "T" later document published after the international filing date or priority 				
"A" document	defining the general state of the art which is not considered to be	date and not in conflict with the applica principle or theory underlying the inver	ition but cited to understand the	
of particular relevance				
"E" earlier app	lication or patent published on or after the international filing date	"X" document of particular relevance; the c considered novel or cannot be considered	laimed invention cannot be	
	which may throw doubts on priority claim(s) or which is cited to	when the document is taken alone	o and an an only one p	
establish ti	ne publication date of another citation or other special reason (as	"Y" document of particular relevance; the cl	laimed invention cannot be	
specified)	,	considered to involve an inventive step	when the document is	
"O" document	document referring to an oral disclosure, use, exhibition or other means combined with one or more other such documents, such combination being obvious to a person skilled in the art			
	published prior to the international filing date but later than the			
priority date claimed "&" document member of the same patent family				
Date of the actual completion of the international search Rate of mailing of the international search report				
14 February 2005 (14.02.2005) Name and mailing address of the ISA/US Authorized officer (2005)				
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US Authorized officer Authorized officer				
Commissioner for Patents				
P.O.	P.O. Box 1450 Alexandria, Virginia 22313-1450 [Telephone No. (571) 272 1600			
Alexandria, Virginia 22313-1450 Facsimile No. (703) 305-3230 [Télephone No. (571) 272 1600 [/				
	· -=/ -00 0200	1	1	